STATEMENT OF BASIS

Title V Renewal
Corstone Industries, LLC
Fiberglass Reinforced Acrylic Sink Manufacturer

On February 26, 2013, CorStone Industries, LLC submitted a Major Source Operating Permit Renewal Application for their facility located in Greenville, Alabama.

CorStone manufactures fiberglass reinforced plastic acrylic kitchen and bathroom sinks. Three electric ovens are used to heat acrylic sheets which are then molded to the shape of sinks. The molded acrylic sinks are sent to one of two spray booths (X001 and X002) where they are sprayed with chopped fiberglass and polyester resin. Each booth has a non-atomized fiberglass spray gun and filters that vent to the atmosphere. The sinks are then sent to trim and drill booths. The trim and drill booths have filters that vent into the building.

Resins are purchased in bulk tank car quantities and 55-gallon drums. Corstone uses a catalyst containing MEKP, MEK, hexylene glycol, and 2, 2, 4 Trimethyl – 1 – 3 pentanediol – diisobutyrate. This facility also uses Acetone as a cleaning solvent. Corstone has two 6,000-gallon horizontal fixed roof resin storage tanks located outside the main building. The resins are mixed in two 250 gallon mixing tanks before being used in the fiberglass booths. CorStone operates 8 hours a day, 5 days a week, and 52 weeks a year for a total of 2,080 hours a year.

Emissions:

Emissions from the facility are mostly styrene. Styrene is both a VOC and a HAP. MEKP, hexylene glycol, and 2, 2, 4 Trimethyl – 1 – 3 pentanediol – diisobutyrate are VOCs however emissions from these chemicals are insignificant. All potential and actual styrene emissions were calculated using emission factor equations from the Fiberglass MACT listed in 40 CFR Part 63, Subpart WWWW. Table 1 below shows the facility's approximate potential and actual emissions. The potential emissions are based on 8,760 hours of operation per year. Actual emissions are based on 1,800 hours of operation per year.

Table 1. Potential and Actual Emissions

Pollutant	*Potential (tpy)*	*Actual (tpy)*
Styrene	219.0	45
HAP	219.0	45

PM (Uncontrolled)	37.44	7.8
PM (Controlled)	0.37	0.08

NSPS:

There are no New Source Performance Standards (NSPS), as listed in 40 CFR Part 60, that apply to the facility.

MACT/NESHAP:

Under 40 CFR 63.5805 (b) of the Fiberglass MACT, Corstone is required to meet the applicable emissions limits for styrene listed in Table 3 of this subpart and work practice standards listed in Table 4 of this subpart. The applicable emissions limit is 88 lb of styrene per ton of resin applied for non-atomized mechanical layup. The work practice standards for this facility are for a cleaning operation, a HAP-containing materials storage operation, and a mixing operation. The facility will also be subject to the applicable recordkeeping and reporting requirements of this subpart.

The fiberglass operation at Corstone is an open molding process therefore it is required to use one of the compliance options listed in 40 CFR 63.5810 (a) through (d) to meet the emission limits in Table 3. Corstone currently uses one resin and therefore uses the option to demonstrate that an individual resin meets the applicable emission limit in Table 3. Under 40 CFR 63.5810 Corstone is allowed to switch between compliance options and is required to complete the emissions calculations within 30 days following the end of each month.

PSD:

This operation is not in one of the 28 categories listed in 335-3-14-.04(2)(a). Therefore, since the potential emissions of all regulated NSR pollutants from this operation are below the major source threshold of 250 tons per year, the operation is considered a minor source with respect to PSD.

Title V:

CorStone is required to obtain a renewal Title V permit because its actual emissions are greater than 10 tons per year of styrene, which is a HAP.

Recommendations:

Since it appears that this facility is capable of meeting all applicable state and federal regulations, I recommend that CorStone Industries, LLC be issued Major Source Operating Permit (MSOP) 203-0008 pending the results of a public comment period of 30 days.

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John Robert Gill
Chemical Branch
Air Division

May 30, 2014
Date